

REMARKS/ARGUMENTS

The present Response is responsive to the non-final Office Action mailed June 10, 2010 in the above-identified application.

Claims 1, 5-8, 10-13, 15-27, 30-38, 40-45, 47-49, 51-52, 54-59, 62-74, 78-79 and 82-110 are the claims currently pending in the present application.

Rejection of Claims 78 and 79 under 35 U.S.C. §102

Claims 78 and 79 are rejected under 35 U.S.C. §102(b) as being anticipated by Tallman, et al., U.S. Patent No. 6,175,308. Reconsideration of this rejection is respectfully requested.

Claim 78 requires a program embodied on a computer-readable medium encoded with computer executable instructions for an application server in a positioning system including an illumination device which transmits a signal, a terminal which is communicably connected to the illumination device and extracts unique information from the signal, the instructions comprising instructions to reacquire terminal position information depending on the accuracy of the acquired terminal position information.

Tallman discloses a security system including tracking units (readers) carried on mobile units (Tallman, Abstract). Tallman discloses that the readers receive location signals transmitted by fixed transmitters, each transmitter transmitting a unique location signal, and that the tracking units or readers transmit a watch dog signal that includes the last two location signals received, and the unique ID signal indicative of the tracking unit itself, to a monitoring station that receives the watch dog signals (Tallman, column 3, lines 7-18).

Tallman is silent as to instructions to reacquire terminal position information depending on the accuracy of the acquired terminal position information, as further required by claim 78.

Claim 79 depends from claim 78, and is therefore patentably distinguishable over the cited art for at least the same reasons.

Rejection of Claims 82-86 under 35 U.S.C. §103

Claims 82-86 are rejected under 35 U.S.C. §103(a) as being obvious from Tallman in view of Simons, U.S. Patent Application Publication No. 2006/0015503. Reconsideration of this rejection is respectfully requested.

Simons does not cure the above-discussed deficiencies of Tallman as they relate to the above-noted recitation of claim 78. Further, the Office Action does not allege that Simons discloses or suggests such a feature. Accordingly, even taken together in combination, Tallman and Simons does not disclose or suggest the recitations of claim 78.

Claims 82-86 depend from claim 78, and are therefore patentably distinguishable over the cited art for at least the same reasons.

Rejection of Claims 1, 6-8, 11-13, 35, 40, 59, 63-66 and 70 under 35 U.S.C. §103

Claims 1, 6-8, 11-13, 35, 40, 59, 63-66 and 70 are rejected under 35 U.S.C. §103(a) as being obvious from Franklin, U.S. Patent No. 7,006,768 in view of Simons. Reconsideration of this rejection is respectfully requested.

Claims 1 and 59 require a terminal communicably connected to the illumination device and configured to extract the unique information from the signal transmitted from the illumination device, a position estimation device communicably connected to the terminal and receiving the unique information from the terminal, the position estimation device being configured to estimate a position of the terminal based on an illumination position information and the unique information received by the terminal, and the position estimation device is configured to read out from the illumination installation position information the position information corresponding to the unique information based on one or more unique information extracted by the terminal within a past predetermined time period.

Franklin discloses that fluorescent ballast assemblies 11 (402) and 12 (404) transmit light to a target device, and the light transmitted by each ballast optically transmit its own serial number (Franklin, column 10, line 59-column 11, line 6). Franklin discloses in connection with Fig. 5 that pager A (508) positioned closest to lamp assembly 504 will receive the light and decode lamp assembly serial number 11, and that if pager A (508) is paged, this pager responds by transmitting an acknowledgment of the page that incorporates the decoded ballast serial number (Franklin, column 11, lines 22-27). Further, Franklin discloses that the ballast assembly then transmits the acknowledgment received from the pager A (508) to the appropriate base or controller station by way of a power line carrier transceiver 302 illustrated in Fig. 3, and in this way, the appropriate base or controller station is made aware that pager A is near lamp assembly 1 (504) (Franklin, column 11, lines 29-36).

Franklin does not disclose or suggest a position estimation device configured to estimate a position of the terminal based on an illumination installation position information and the unique information received by the terminal, as required by claims 1 and 59. As discussed, Franklin discloses that the acknowledgment from the pager is received by a fixed ballast and thus, there is no need to estimate a position based on a position information indicating the installation position of the illumination device associated with the unique information.

In a similar vein, Franklin does not disclose or suggest that the position estimation device estimates a position of the terminal based on the unique information received by the terminal, as required by claims 1 and 59. As discussed, the ballast of Franklin knows its own position and transmits such information to the base or controller station of Franklin, and thus, the ballast has no need to read out the installation position information corresponding to the unique information received from the terminal as extracted by the terminal from the signal from the illumination device.

Simons discloses a portable device location tracking system that, for example, in a shopping mall, is able to track portable devices using stations positioned at various locations that use short range radio protocol (Simons, Abstract). Simons discloses that a user device 10a begins a message transaction with a fixed station 14a that may be stationed, for example, at a door of a store in a shopping mall (Simons, paragraph [0033]). Simons discloses that the portable device 10a transmits its own ID to fixed station 14a, for example, when portable device 10a enters within a range of fixed station 14a and is automatically detected by station 14a, which then acts as a beacon and transmits information to infrastructure computer 18 (Simons, paragraph [0034]).

Simons does not cure the above-discussed deficiencies of Franklin as they relate to the above-noted recitations of claims 1 and 59. That is, Simons does not disclose or suggest a position estimation device that estimates a position of the terminal based on unique information received by the terminal, as required by claims 1 and 59. As discussed, Simons describes that the fixed station 14a and the other fixed stations each know their positions and act as beacons of the infrastructure. Simons is silent as to estimating a position of a terminal based on a unique information received by the terminal, the unique information having been extracted from a signal transmitted from the illumination device, as required by claims 1 and 59.

Claims 1, 6-8, 11-13, 35, 40 depend from claim 1 and claims 63-66 and 70 depend from claim 59, and therefore, claims 6-8, 11-13, 35, 40, 63-66 and 70 are patentably distinguishable over the cited art for at least the same reasons as their respective base claims.

Rejection of Claims 5, 20, 22-27, 30, 31-34, 36-38, 41-45, 47-49, 51, 52, 54-58, 67-69, 71-74, 87-110 under 35 U.S.C. §103

Claims 20, 25-27, 67, 87 and 88 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Steffie, U.S. Patent Application Publication No. 2004/0251884). Reconsideration of this rejection is respectfully requested.

Claim 22 is rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Mollema, U.S. Patent Application Publication No. 2003/0155869) and Baarman, U.S. Patent No. 6,731,071.

Claims 5, 47-49, 54-58, 91-92, 94-96 and 103-110 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin, Simons, and further in view of Tallman.

Claims 23-24 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, Mollema, Baarman, and further in view of Fukushima, U.S. Patent No. 6,756,723.

Claims 30 and 52 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Zhang, U.S. Patent No. 6,528,782.

Claims 31-34 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Gong, U.S. Patent Application Publication No. 2005/0032531, Fiset, U.S. Patent No. 6,861,658 and Cabrera, U.S. Patent Application Publication No. 2004/0101312.

Claims 36-38 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Barber, U.S. Patent No. 7,212,112).

Claims 41-45 and 71-74 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, and further in view of Irvin, U.S. Patent No. 6,768,909.

Claims 93 and 97-98 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, Tallman and Irvin.

Claims 99-102 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, Tallman, and further in view of Sweatte, U.S. Patent No. 6,109,869.

Claim 51 is rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, Tallman, and further in view of Dowling, et al., U.S. Patent No. 7,309,965.

Claims 68 and 69 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons, Gong and Fiset.

Claims 89 and 90 are rejected under 35 U.S.C. §103(a) as being obvious over Franklin in view of Simons and Fukushima. Reconsideration of these rejections is respectfully requested.

Steffie, Mollema, Baarman, Tallman, Fukushima, Zhang, Gong, Fiset, Cabrera, Barber, Irvin, Sweatte and Dowling do not cure the above-discussed deficiencies of Franklin and Simons as they relate to the above-referenced recitations of claims 1 and 59. Further, the Office Action does not allege that these secondary references disclose or suggest such features. Accordingly, even taken together in combination, the cited art does not disclose or suggest the recitations of claims 1 and 59.

Claims 20, 25-27, 87, 88, 22, 5, 47-49, 54-58, 91-92, 94-96, 103-110, 23, 24, 30, 52, 31-34, 36-38, 41-45, 93, 97-98, 99-102 and 51 depend from claim 1 and claims 67, 71-74, 68, 69, 89 and 90 depend from claim 59. Therefore, claims 5, 20, 22-27, 30, 31-34, 36-38, 41-45, 47-49, 51, 52, 54-58, 67-69, 71-74, 87-110 are patentably distinguishable over the cited art for at least the same reasons as their respective base claims.

In view of the foregoing discussion, withdrawal of the rejections and allowance of the claims of the application are respectfully requested.

Respectfully submitted,

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